

# DRAFT

## Coronado National Forest Wilderness Need Evaluation

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### Introduction

The purpose of the Wilderness Need Assessment is to identify the need for additional wilderness on the Coronado National Forest and in the US Forest Service's Southwest Region (Region 3) based on a variety of factors including visitor demand, the need to provide protections for various fish, wildlife, and plant species, and providing a reasonable representation of landforms and ecosystems within the National Wilderness Preservation System.

Forest Service Handbook (FSH) 1909.12, Subsection 72.3 describes the factors that are to be considered. The following report provides the complete documentation of consideration of these factors following the Forest Service's Southwest Region working group guidance. Because most of these factors are intended to be evaluated at a regional scale, the majority of table and figures were created using data from the Region 3 Wilderness Needs Evaluation (Forest Service 2007a).

### Factor #1

#### Factor #1, Item #1

**The location, size, and type of other wildernesses in the general vicinity and their distance from the proposed area.**

- 1. How many, what size (# of acres), and what types of other wilderness areas exist within the general vicinity of your forest (within 100 air miles)?*

There are 8 wilderness areas on the Coronado National Forest (the Forest or Coronado NF) and there are 39 Wilderness Areas total within 100 air miles of the Coronado NF, including those on other National Forests, National Park Service (NPS) administered lands, and Bureau of Land Management (BLM) administered lands (Table 1). These Wilderness Areas total approximately 2 million acres.

- 2. How far from the potential wildernesses are these other areas?*

Each potential wilderness has many Wilderness Areas within 100 miles (Table 2). The potential wilderness areas are on average 62.5 miles from surrounding wilderness, however, several are neighboring existing wilderness (0 miles). Bunk Robinson WSA, Whitmire Canyon WSA, Skeleton Canyon, and Deer Creek potential wilderness areas have the fewest acres of existing Wilderness within 100 miles. Chiricahua Addition North and Jhus Canyon potential wilderness areas have the furthest average distance to existing Wilderness Areas.

**Table 1: Existing Wilderness Areas in the General Vicinity of the Coronado NF**

<b>Wilderness Area Name</b>	<b>Acres</b>	<b>Administered by:</b>
Aldo Leopold Wilderness	1,456	FS
Aravaipa Canyon Wilderness	19,790	BLM
Baboquivari Peak Wilderness	2,776	BLM
Bear Wallow Wilderness	11,113	FS
Blue Range Primitive Area	179,819	FS
Blue Range Wilderness	35,815	FS
Chiricahua National Monument Wilderness	88,793	FS
Chiricahua Wilderness*	12,161	FS
Coyote Mountains Wilderness	5,795	BLM
Dos Cabezas Mountains Wilderness	11,855	BLM
Escudilla Wilderness	5,210	FS
Fishhooks Wilderness	11,400	BLM
Four Peaks Wilderness	60,487	FS
Galiuro Wilderness*	75,585	FS
Gila Wilderness	520,244	FS
Hellsgate Wilderness	38,845	FS
Mazatzal Wilderness	53,164	FS
Miller Peak Wilderness*	20,381	FS
Mount Baldy Wilderness	7,627	FS
Mount Wrightson Wilderness*	25,596	FS
Needle's Eye Wilderness	6,277	BLM
North Maricopa Mountains Wilderness	10,862	BLM
North Santa Teresa Wilderness	5,733	BLM
Organ Pipe Cactus Wilderness	249,596	NPS
Pajarita Wilderness*	7,897	FS
Peloncillo Mountains Wilderness	19,244	BLM
Pusch Ridge Wilderness*	56,743	FS
Redfield Canyon Wilderness	6,206	BLM
Rincon Mountain Wilderness*	38,611	FS
Saguaro Wilderness	77,119	NPS
Salome Wilderness	18,688	FS
Salt River Canyon Wilderness	32,035	FS
Santa Teresa Wilderness*	28,769	FS
Sierra Ancha Wilderness	18,198	FS
Sierra Estrella Wilderness	14,746	BLM
South Maricopa Mountains Wilderness	58,963	BLM
Superstition Wilderness	158,920	FS
Table Top Wilderness	34,696	BLM
White Canyon Wilderness	6,981	BLM
<b>TOTAL</b>	<b>2,038,196</b>	

\*Coronado National Forest

**Table 2: Proximity of potential wilderness to existing Wilderness Areas within the general vicinity of the Coronado National Forest**

<b>Potential Wilderness Area</b>	<b># of Existing Wilderness areas within 100 Miles</b>	<b>Acres of Existing Wilderness within 100 miles</b>	<b>Avg distance* to existing Wilderness (miles)</b>
PW-05-03-D1-001 Dragoon	19	510,523	63
PW-05-03-D1-002 Chiricahua Addition South	14	1,014,925	67
PW-05-03-D1-003 Ku Chish	14	1,014,925	67
PW-05-03-D1-004 Bunk Robinson WSA	6	191,045	63
PW-05-03-D1-005 Whitmire Canyon WSA	7	197,251	65
PW-05-03-D1-006 Devil's Kitchen	8	260,510	68
PW-05-03-D1-007 Skeleton Canyon	7	197,251	65
PW-05-03-D1-008 Deer Creek	7	197,251	63
PW-05-03-D1-009 Chiricahua Addition West	14	472,726	67
PW-05-03-D1-010 Chiricahua Addition North	15	484,126	69
PW-05-03-D1-011 Jhus Canyon	15	484,126	69
PW-05-03-D2-001 Tumacacori	17	812,696	59
PW-05-03-D2-002 Mt. Wrightson Addition	18	486,046	62
PW-05-03-D2-003 Pajarita Addition West	11	414,797	63
PW-05-03-D2-004 Pajarita Addition East	11	414,797	63
PW-05-03-D2-005 Cobre	11	418,867	65
PW-05-03-D2-006 Pajarito	10	316,708	60
PW-05-03-D2-007 Mount Fagan	20	527,713	58
PW-05-03-D2-008 Happy Jack	15	478,077	61
PW-05-03-D3-001 Whetstone	20	515,986	60
PW-05-03-D3-002 Mt Washington	13	429,517	65
PW-05-03-D3-003 Canelo	15	478,077	67
PW-05-03-D4-001 Winchester	26	1,472,973	59
PW-05-03-D4-002 Galiuro Addition	31	1,621,938	62

Potential Wilderness Area	# of Existing Wilderness areas within 100 Miles	Acres of Existing Wilderness within 100 miles	Avg distance* to existing Wilderness (miles)
PW-05-03-D4-003 Mount Graham WSA	26	1,480,226	63
PW-05-03-D4-004 Santa Teresa Addition North	28	1,027,787	60
PW-05-03-D4-005 Santa Teresa Addition South	28	1,044,952	60
PW-05-03-D4-008 Mount Graham Addition	28	1,044,952	63
PW-05-03-D5-001 Samaniego Ridge	28	917,199	57
PW-05-03-D5-002 East Catalina	28	917,199	54
PW-03-05-D5-003 Little Rincon	20	527,713	51
		<b>AVERAGE DISTANCE</b>	<b>62.5</b>

\*Average Distance is the average of the distances between the potential wilderness center and the center of each existing wilderness.

## Factor #1, Item #2

### Accessibility of existing and potential wildernesses to population centers and user groups.

- 1. How accessible are existing and potential wilderness areas in the vicinity to population centers in the planning area?*

#### *Current Wilderness Distribution Southwestern Region*

In Region 3, out of a total of 20.8 million acres of Forest Service lands, 2.7 million are designated wilderness, representing 13 percent of the Forest Service land base within the Region. Compared to the national figure, there are about five percent fewer wilderness acres in Region 3. For wilderness acres in the region to be at the national average would require the addition of about 1 million acres.

In Arizona, most wilderness is located in the southwestern quadrant of the state. In New Mexico, most wilderness is located in the northeast quadrant of the state (see Table 3 below). The least amount of wilderness in Arizona is in the northeast quadrant, and the least amount of wilderness in New Mexico is in the southeast quadrant. Wilderness within the southeast quadrant of Arizona, which contains the Coronado NF, is just below the national average of 18 percent of federal lands designated as wilderness. Wilderness within the southwest quadrant of New Mexico, which contains the Coronado NF, is much further below the national average of 18 percent. Therefore, the percent of wilderness in Region 3 is lower than the national average. Existing wilderness is less accessible to the communities of southeastern Arizona and southwestern New Mexico compared to communities in other parts of the region.

**Table 3: Wilderness Acres by Quadrant, Arizona and New Mexico, 2007**

<b>State and Quadrant</b>	<b>Managing Agencies</b>	<b>Number of Wilderness Acres in Quadrant</b>	<b>Total Federal Acres (BLM, FWS, FS, NPS only)</b>	<b>Wilderness Acres/Total Federal Acres (BLM, FWS, FS, NPS only)</b>
AZ Northwest	BLM, FWS, FS, NPS	1,028,820	12,508,980	8%
AZ Northeast	BLM, FS, NPS	173,036	2,855,187	6%
AZ Southwest	BLM, FS, FWS, NPS	2,287,391	7,564,100	30%
AZ Southeast	BLM, FS, NPS	1,232,699	7,628,459	16%
NM Northwest	BLM, FS, NPS	356,017	6,086,263	6%
NM Northeast	FS	262,193	2,562,908	10%
NM Southwest	FS, FWS	896,588	10,965,525	8%
NM Southeast	FS, FWS, NPS	123,490	7,139,709	2%

### *Accessibility to Wilderness for Coronado National Forest Communities*

Table 4 shows the acres of wilderness within 100 miles of the population centers in and around the Coronado NF. Based on Tucson's large population in relation to total acres of wilderness within 100 miles, the area is largely underserved compared to other surrounding communities. Mount Fagan, Samaniego, East Catalina, Mt. Wrightson, Whetstones and Little Rincon potential wilderness areas are best able to meet the demand based on access and proximity to Tucson (see Table 5). The approximately 2.1 million acres of wilderness within 100 miles of Tucson serves a total population of 946,362 (Tucson Metropolitan Statistical Area, US Census 2006). Overcrowding in wilderness areas close to large metropolitan areas is a common concern of resource managers throughout Arizona.

**Table 4: Existing Wilderness Acres within 100 Miles of Coronado National Forest Communities with Populations over 5,000**

<b>Population Center</b>	<b>Acres of Existing Wilderness within 100 Miles</b>
Apache Junction	336,095
Arizona City	1,074,612
Avra Valley	1,042,566
Benson	528,090
Bisbee	442,967
Casa Grande	1,105,560
Catalina	827,648
Chandler	723,999
Coolidge	968,919
Deming	641,898
Douglas	369,588
Eloy	1,114,194
Florence	868,970
Flowing Wells	790,763
Fountain Hills	638,137
Gilbert	721,123
Globe	1,031,758
Green Valley	443,348
Marana	903,327
Maricopa	861,801
Mesa	638,199
Nogales	316,708
Oro Valley	790,763
Picture Rocks	1,005,680
Queen Creek	801,988
Safford	1,434,626
San Luis	669,595
Sierra Vista	503,431
Silver City	885,710
South Tucson	672,631
Tanque Verde	753,741
Three Points	901,756
Tucson	779,900
Tucson Estates	785,773
Vail	562,786

## Factor 1 Rating Criteria:

Potential wilderness areas were given a rating of “high” if the area could sufficiently meet the needs of the underserved population of Tucson. In order to receive a high rating, the PWA must be within 40 miles of the Tucson metropolitan area. Potential wilderness areas were given a rating of “medium” if the area could sufficiently meet the needs of the communities with populations over 10,000. In order to receive a medium rating, the PWA must be within 30 miles of these communities. Those potential wilderness areas that did not fall into either of these categories were given a rating of “low”.

## Factor 1 Results:

**Table 5: Factor 1 – Need Ratings for Coronado National Forest Potential Wilderness Areas**

Potential Wilderness Area	Factor 1 Need Rating
Dragoon	Medium
Chiricahua Addition South	Medium
Ku Chish	Low
Bunk Robinson WSA	Medium
Whitmire Canyon WSA	Medium
Devil's Kitchen	Medium
Skeleton Canyon	Low
Deer Creek	Low
Chiricahua Addition West	Low
Chiricahua Addition North	Low
Jhus Canyon	Low
Tumacacori	Medium
Mt. Wrightson Addition	High
Pajarita Addition West	Medium
Pajarita Addition East	Medium
Cobre	Medium
Pajarito	Medium
Mount Fagan	High
Happy Jack	Medium
Whetstone	High
Mt Washington	Medium
Canelo	Medium
Winchester	Low
Galiuro Addition	Low
Mount Graham WSA	Medium
Santa Teresa Addition North	Low
Santa Teresa Addition South	Medium
Mount Graham Addition	Medium
Samaniego Ridge	High
East Catalina	High
Little Rincon	High

## Factor #2

### Factor #2, Item #1

Present visitor pressure on other wildernesses.

1. *What is the level of current use in Forest Service Wilderness areas, as well as other Wilderness in the area?*

#### *Current Wilderness Use - Forest Service Southwestern Region*

Wilderness in the Southwestern Region experienced a total of 1.9 million visits, in the years 2000 – 2003, according to Round 1 of National Visitor Use Monitoring (NVUM). Only two rounds of visitor use data has been collected for most forests, so statistically valid trend information is not available. Wilderness visitation ranged from a low of almost 9,500 visits on the Kaibab NF to a high of almost 760,000 visits on the Cibola NF. Based on this data, four forests are considered to have high wilderness use (Gila, Cibola, Coronado, and Coconino), four have moderate use (Apache-Sitgreaves, Santa Fe, Carson, and Tonto), and three have low use (Prescott, Lincoln, and Kaibab).<sup>1</sup> The following table shows the estimated number of wilderness visits by forest.

**Table 6: Annual Wilderness Visitation Use Estimate by Forest**

National Forest	Visits*(1,000s)	80% Confidence Interval (%) +/-	Percent of Visits for Region
Cibola	577.4	62.2	32%
Coronado	528.2	27.8	29%
Coconino	269.8	62.3	15%
Gila	140.7	96.5	8%
Tonto	109.4	30.9	6%
Santa Fe	46.6	8.3	3%
Apache-Sitgreaves	38.1	46.9	2%
Carson	33.1	30.6	2%
Lincoln	23.0	33.3	1%
Prescott	15.8	29.5	1%
Kaibab	10.8	35.9	1%
<b>ALL FORESTS COMBINED</b>	<b>1,792.8</b>	<b>24.9</b>	<b>100%</b>

\* A National Forest Visit is defined as the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A National Forest Visit can be composed of multiple Site Visits.

+ Confidence interval - Defines the upper and lower bounds of the visitation estimate at the 80% confidence level, for example if the visitation estimate is 100 +/- 5%, one would say “at the 80% confidence level, visitation is between 95 and 105 visits”.

<sup>1</sup> This is based on use categories developed by the Forest Service Wilderness Advisory Group, with low use defined as 0-10,000 visits, medium as 10,001 – 30,000 visits, and high being greater than 30,000 visits. Total wilderness use for a forest from NVUM was divided by the number of wildernesses the forest is lead for, to get an average amount of use per wilderness.



According to the 2008 Arizona Statewide Comprehensive Outdoor Recreation Plan (SCORP), 74.5% of Arizonans participated in visiting a wilderness area or nature preserve, and on average, they visited such areas over 12 days each year. In addition, 47.4% of surveyed individuals say that their use of wilderness and nature preserves will increase in the future. In the Tucson metropolitan area, SCORP reports that the Pima Association of Governments (PAG) region shows the highest current use and future need for the activity “visit a wilderness area or nature preserve” in the state.

### *Current Wilderness Use - Other Agencies*

The National Park Service sells backcountry permits to those using wilderness-like areas in national parks and national monuments. National parks in the vicinity of the Coronado NF sell wilderness camping and special use permits in southeastern Arizona, predominantly at Saguaro National Park.

**Table 7: National Parks Backcountry Permits (2006)**

State	Backcountry Permits Sold
Arizona	305,739
California	175,041
New Mexico	2,777
Utah	117,033

Bureau of Land Management (BLM) reports 44,963 annual visitors to BLM Wilderness areas in Arizona (date from Fiscal Year 2005). Most of these visits occurred in southern Arizona.

### *Conclusion - Coronado National Forest Wilderness Use/Demand*

Some Wilderness areas on the Coronado NF do not experience high use because they are either difficult to access or have few developed trails. However, some Wilderness areas on the Coronado NF (e.g. Pusch Ridge Wilderness and Mt. Wrightson Wilderness) are very accessible to Forest visitors, are close to communities, and have developed trailheads and, therefore, these areas account for most of the wilderness use on the Forest.

With approximately 528,000 annual visits to existing Wilderness, the Coronado NF ranks second in the Region for Wilderness use. In general, there is already very high use of wilderness use in southeastern Arizona, including the National Parks Service backcountry areas. Generally, high current use supports the need for additional designations.

## Factor #2, Item #2

### **Trends in use, changing patterns of use, population expansion factors, and trends and changes in transportation.**

#### *National Trends in Wilderness Use*

Data from the first round of NVUM show that wilderness use on all national forests amounted to about 8.6 million visits annually (USDA, Forest Service 2007). Looking to the future, it is expected that wilderness visitation will continue to increase over the next 50 years because of the increasing population nationally, however, per capita visits are expected to decline (Bowker et. al. 2006). According to Bowker et. al. (2006), income, gender (male), immigrant status (born in the United States), and environmental awareness are positively correlated with wildland recreation participation. Race (black and other), ethnicity (Hispanic), age, distance, and urban dwelling negatively correlate to wildland recreation participation (Bowker et. al. 2006).

#### *Population Expansion Factors and Demographics – Southwest Region*

Population growth in both Arizona and New Mexico exceeded U.S. population growth during the period 1990 to 2000. During this time period the United States grew at a rate of 13.2 percent, while the Arizona growth rate was 40 percent, and New Mexico grew at a rate of 20 percent (U.S. Census Bureau 2005).

Growth predictions in Arizona are that its population will increase by 109 percent between 2000 and 2030 (U.S. Census Bureau 2005). Bowker predicts that population growth in expanding cities in the West and Southwest, in particular, will result in increased use in wildernesses in the vicinity (Bowker et al 2006). It can also be expected that population increases in the communities adjacent to the National Forests will occur because of their attractiveness in terms of the availability of quality outdoor recreation experiences, clean air and water, and a natural setting.

The demographics of Arizona and New Mexico in terms of race and ethnicity<sup>2</sup> are different from the United States as a whole. The major differences between the United States as a whole and Arizona and New Mexico are the lower proportion of African American and Asian people, and the higher percentage of Native American/American Indians, and persons of Hispanic/Latino origin. Even though low population growth is expected for the white population in Arizona and New Mexico, a moderate increase in wilderness use is expected from this demographic. All other races and ethnicities are predicted to have higher population growth rates, but lower increases in wilderness use.

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<sup>2</sup> Race and ethnicity are defined as separate concepts by the federal government. People of a specific race may be of any ethnic origin, and people of a specific ethnic origin may be of any race.

## *Trends and Changing Patterns in Use – Coronado National Forest*

The Coronado National Forest Comprehensive Evaluation Report (CER) Supplementary Document to meet Analysis of the Management Situation (AMS) summarizes recreation trends on the Forest, saying:

*Demand for outdoor recreation is expected to grow indefinitely. As long as populations are increasing, so will the demand for recreation on the Coronado NF. Non-consumptive wildlife and developed recreation will grow the most, exceeding the Forest's ability to supply. Managers must either invest in new infrastructure or adopt regulations to control use at developed sites. Capacity of general forest areas and designated wilderness is expected experience slower demand growth during the next planning cycle. Therefore managers should focus their efforts on more popular activities requiring easy access and public*

Some wilderness areas on the Coronado National Forest are easily accessible and are in close proximity to local communities, making them very popular and sometimes overcrowded recreation areas. At times, this makes it difficult to retain the wilderness experience, quality, and character of an area. The high volume of visitors, particularly in areas with perennial water, may conflict with those seeking a more primitive wilderness experience. These areas may meet the demand for wilderness users with lower expectations of solitude, particularly those who come from large urban areas.

## *Conclusions - Demand for Wilderness in the Region and on the Coronado National Forest*

1. Increased demand for additional wilderness in both Arizona and New Mexico should be anticipated based on population growth during the period of 1990 to 2000, which exceeded the national growth rate.
2. Assuming Arizona continues to grow at a rate greatly outpacing the national rate (predicted to be about 3 times the national rate), the number of visits to existing wilderness will continue to increase, and Arizona in particular could benefit from additional wilderness.
3. Public demand increases with proximity to six population centers: Flagstaff, Phoenix, Tucson, Santa Fe, Taos, and Albuquerque. Consider wilderness recommendations within 100 miles of those cities to provide for that demand.
4. Some additional public demand for wilderness in the Southwestern Region will occur from the influx of people moving to communities in the vicinity of the National Forests.
5. In terms of geographic distribution of wilderness, the Southwestern Region is under-represented with 12% percent of federal land in wilderness acres as compared with the 17% nationally.
6. Desirability of the scenic mountainous settings available in the rural communities within and adjacent to national forests in the Southwestern Region will attract new retirees and others, further contributing to a growth in wilderness visitation.

## Factor 2 Rating Criteria/Results:

Based on population increases, the high existing use on the Coronado National Forest and the high demand for wilderness in southeastern Arizona, there is a high need for wilderness on the Coronado National Forest, and thus, all potential wilderness areas are rated as “high” for Factor 2.

## Factor #3

**The extent to which non-wilderness lands on the NFS unit or other Federal lands are likely to provide opportunities for unconfined outdoor recreation experiences.**

- 1. Are there non-wilderness lands on or near the unit that are likely to provide opportunities for unconfined outdoor recreation experiences?*
- 2. If so, what types of lands are they, where are the lands located, and how might they meet demands for “unconfined outdoor recreation experiences”.*

There are various land designations that are not wilderness, but are likely to provide opportunities for unconfined outdoor recreation experiences within 100 miles of the Coronado National Forest. The Forest Service uses the Recreational Opportunity Spectrum (ROS) to classify settings for recreational opportunities. The Semi-Primitive Non-Motorized and Primitive ROS classifications are likely to provide a “like-wilderness” setting. Areas taken into consideration for this evaluation must qualify under these classifications and be at least 5000 acres in size. Inventoried Roadless Areas (IRA) may also provide an unconfined outdoor recreation experience. These land designations imply that there are limited roads and, therefore, reduced evidence of human use. These lands can provide an unconfined recreation experience similar to wilderness. Wilderness Study Areas, BLM National Conservation Areas and USFWS National Wildlife Refuges are additional areas that are also likely to provide these types of experiences. There are over 1.2 million acres of these “wilderness-like” areas on the Coronado (Table 8).

**Table 8: Wilderness-like Areas on the Coronado NF**

<b>Wilderness-Like Areas</b>	<b>Description</b>	<b>Acres</b>
Primitive	ROS	510,628
Semi-Primitive Non-Motorized	ROS	238,150
<b>Total ROS: 748,778</b>		
Butterfly Roadless Area	IRA	42,263
Catalina St. Pk. Roadless Area	IRA	950
Canada del Oro Roadless Area	IRA	1,954
Chiricahua	IRA	76,863
Galiuro	IRA	28,313
Happy Valley	IRA	7,966
Lower Dragoon Roadless	IRA	1,164
Lower Rincon	IRA	3,275
Middle Dragoon Roadless	IRA	10,537
Oracle Roadless	IRA	22,347
Peloncillo	IRA	56,505
Pinaleno	IRA	130,851
Santa Rita	IRA	6,073
Santa Teresa	IRA	8,922
Tumacacori	IRA	44,559
Upper Dragoon Roadless	IRA	2,531
Upper Rincon Roadless	IRA	2,988
Whetstone	IRA	20,713
Winchester	IRA	13,451
<b>Total IRA: 482,225</b>		
<b>TOTAL WILDERNESS-LIKE ACRES ON THE CORONADO NATIONAL FOREST:</b>		<b>1,231,003</b>

**Table 9: Wilderness-like Areas in and near the Coronado NF**

<b>Wilderness-like Areas Within 100 Miles</b>	<b>Ownership</b>	<b>Acres</b>
Inventoried Roadless Areas	Coronado, Tonto, Apache-Sitgreaves, Gila NF	1,414,353
Semi-Primitive Non-Motorized – ROS	Coronado, Tonto, Apache-Sitgreaves, NFs	1,248,935
Primitive – ROS	Coronado, Tonto, Apache-Sitgreaves, NFs	870,790
Wilderness Study Areas	Forest Service and Bureau of Land Management	316,340
National Conservation Areas	Bureau of Land Management	129,274
National Wildlife Refuges	US Fish and Wildlife Service	161,632
<b>TOTAL</b>		<b>4,141,324</b>

**Table 10: PWA Overlap with Inventoried Roadless Areas**

Potential Wilderness Area	Inventoried Roadless Area	Acres of PWA Overlapped by IRA	Percent of PWA Overlapped by IRA
Bunk Robinson WSA	Peloncillo	17,476	92%
Chiricahua Addition South	Chiricahua	7,397	63%
Chiricahua Addition West	Chiricahua	594	22%
Deer Creek	Peloncillo	4,718	84%
Devil's Kitchen	Peloncillo	4,028	71%
Dragoon	Middle Dragoon	8,897	62%
Jhus Canyon	Chiricahua	4,650	45%
Ku Chish	Chiricahua	22,447	85%
Skeleton Canyon	Peloncillo	2,060	41%
Whitmire Canyon WSA	Peloncillo	10,889	89%
Chiricahua Addition North	Chiricahua	1,828	26%
Cobre	-	0	0%
Mount Fagan	Santa Rita	4,303	69%
Mt. Wrightson Addition	-	0	0%
Pajarita Addition East	-	0	0%
Pajarita Addition West	-	0	0%
Pajarito	Tumacacori	3,020	36%
Tumacacori	Tumacacori	30,305	81%
Happy Jack	-	0	0%
Galiuro Addition	Galiuro	15,333	91%
Mount Graham Addition	Pinaleno	12,828	77%
Santa Teresa Add. North	Santa Teresa	494	16%
Santa Teresa Add. South	Santa Teresa	2,519	78%
Winchester	Winchester	7,101	98%
Mount Graham WSA	Pinaleno	60,755	99%
East Catalina	Butterfly	24,831	97%
Samaniego Ridge	Oracle	11,873	78%
	Canada del Oro	1,852	12%
Little Rincon	Happy Valley	6,661	74%
Canelo	-	0	0%
Whetstone	Whetstone	14,579	76%
Mt. Washington	-	0	0%

### Factor 3 Rating Criteria/Results:

There are significant opportunities for unconfined outdoor recreation experiences outside of the designated Wilderness Areas within 100 miles of the Coronado National Forest, including over 4.1 million acres of Federal Lands. This is double the amount of designated Wilderness within 100 miles of the Coronado NF. Therefore, all potential wilderness areas received a “low” need rating for Factor 3.

### Factor #4

**The need to provide a refuge for those species that have demonstrated an inability to survive in less than primitive surroundings, or the need for a protected area for other unique scientific values or phenomena.**

- 1. Are there species on the forest that require primitive surroundings for survival, or are there areas that need protection for other unique scientific values or phenomena?*

### Factor 4 Rating Criteria:

As part of the Forest Plan revision process, the Coronado National Forest has developed a list of species considered in the population viability evaluation. Though all of these species would benefit from reduced disturbance, none require a primitive wilderness environment to survive. The PWAs were rated based on the presence of threatened, endangered, sensitive, and highly vulnerable (G1-G2, T1-T2) species from a forest total of 255 species. The PWA was given a high rating if the area contained more than 90 of these species. The PWA was given a medium rating if the area contained 40-90 of these species. Those PWAs that contained less than 40 of these species were given a low rating.

### Factor 4 Results:

No species were identified as requiring primitive surroundings. However, those potential wilderness areas that provided habitat for over 90 targeted species were highly rated. 9 PWAs were rated as high for this factor, with 16 PWAs rating medium and 6 PWAs rating low.

**Table 10: Ratings for Species that Benefit from Primitive Surroundings**

<b>Ratings for Species Benefit</b>	<b>Potential Wilderness Area</b>
High	Ku Chish Chiricahua Addition South Chiricahua Addition West Chiricahua Addition North Jhus Canyon Mount Fagan Happy Jack Mt. Washington Canelo
Medium	Bunk Robinson WSA Whitmire Canyon WSA Devil's Kitchen Skeleton Canyon Deer Creek Mount Graham WSA Mount Graham Addition Samaniego Ridge East Catalina Little Rincon Tumacacori Pajarita Addition West Pajarita Addition East Cobre Pajarito Mt. Wrightson Addition
Low	Whetstone Santa Teresa Addition North Santa Teresa Addition South Winchester Dragoon Galiuro Addition

## **Factor #5**

**Within social and biological limits, management may increase the capacity of established wildernesses to support human use without unacceptable depreciation of the wilderness resource.**

***1. Are there opportunities to alter management of existing wildernesses to accommodate additional demand without unacceptable depreciation of the wilderness resources?***

Use in the existing wilderness areas on the Coronado National Forest is largely self-regulating due to rugged terrain and a lack of water. Visitor use is considered high in the wilderness areas adjacent to the Tucson metropolitan area and includes the Pusch Ridge and Mt. Wrightson Wilderness areas. The



Coronado NF also has wilderness areas that are remote, difficult to access, and where visitor use is considered low. Here, additional demand could be accommodated without management changes.

### **Factor 5 Rating Criteria/Results:**

All of the PWAs rated low for this factor given the proximity of existing wilderness areas that can accommodate additional use.

## **Factor #6**

**An area's ability to provide for preservation of identifiable landform types and ecosystems.**

### ***1. Does the potential wilderness area contain any regionally underrepresented ecosystem and landform types?***

R3 guidance identified underrepresented landforms as those landscapes that represent less than 3% of existing wilderness in the Southwest Region. None of the potential wilderness areas contain any underrepresented landforms. R3 guidance identified underrepresented ecosystems as those potential natural vegetation types (PNVTs) that represent less than 3% of existing wilderness in the Southwest Region. The Coronado National Forest contains six underrepresented ecosystems: Interior Chaparral, Madrean Encinal Woodland, Madrean Pine Oak Woodland, Mixed Conifer Forest, Spruce Fir Forest, and Riparian Areas (Cottonwood Willow Riparian Forest, Montane Willow Riparian Forest). Table 11 shows the potential wilderness areas with underrepresented ecosystems and the PWA ratings based on percent composition of underrepresented ecosystems.

### **Factor 6 Rating Criteria:**

Potential wilderness areas that were composed of over 90% underrepresented ecosystems received a high rating. PWAs that were composed of 50-90% underrepresented ecosystems received a medium rating. PWAs that were composed of less than 50% underrepresented ecosystems received a low rating.

## Factor 6 Results:

**Table 11: Underrepresented Ecosystems in Potential Wilderness**

Potential Wilderness Area	% Underrepresented Ecosystems	Total Underrepresented Acres	Rating
PW-05-03-D1-001 Dragoon	83.8%	5,851	Med
PW-05-03-D1-002 Chiricahua Addition South	84.2%	2,138	Med
PW-05-03-D1-003 Ku Chish	88.5%	12,242	Med
PW-05-03-D1-004 Bunk Robinson WSA	63.8%	12,160	Med
PW-05-03-D1-005 Whitmire Canyon WSA	81.6%	9,936	Med
PW-05-03-D1-006 Devil's Kitchen	69.9%	3,965	Med
PW-05-03-D1-007 Skeleton Canyon	49.0%	2,478	Low
PW-05-03-D1-008 Deer Creek	50.3%	2,840	Med
PW-05-03-D1-009 Chiricahua Addition West	94.2%	2,572	High
PW-05-03-D1-010 Chiricahua Addition North	95.3%	6,561	High
PW-05-03-D1-011 Jhus Canyon	95.9%	9,805	High
PW-05-03-D2-001 Tumacacori	50.5%	17,190	Med
PW-05-03-D2-002 Mt. Wrightson Addition	96.3%	791	High
PW-05-03-D2-003 Pajarita Addition West	29.4%	1,210	Low
PW-05-03-D2-004 Pajarita Addition East	25.5%	293	Low
PW-05-03-D2-005 Cobre	32.5%	2,392	Low
PW-05-03-D2-006 Pajarito	55.6%	4,692	Med
PW-05-03-D2-007 Mount Fagan	40.9%	2,554	Low
PW-05-03-D2-008 Happy Jack	56.4%	3,858	Med
PW-05-03-D3-001 Whetstone	47.0%	7,808	Low
PW-05-03-D3-002 Mt Washington	73.7%	4,571	Med
PW-05-03-D3-003 Canelo	80.6%	6,851	Med
PW-05-03-D4-001 Winchester	83.5%	5,776	Med
PW-05-03-D4-002 Galiuro Addition	91.1%	7,904	High
PW-05-03-D4-003 Mount Graham WSA	56.5%	34,656	Med
PW-05-03-D4-004 Santa Teresa Addition North	86.1%	2,647	Med
PW-05-03-D4-005 Santa Teresa Addition South	87.7%	2,824	Med
PW-05-03-D4-008 Mount Graham Addition	64.0%	10,704	Med
PW-05-03-D5-001 Samaniego Ridge	87.3%	11,651	Med
PW-05-03-D5-002 East Catalina	81.5%	20,833	Med
PW-03-05-D5-003 Little Rincon	30.8%	2,749	Low

## Summary of Factors

The PWAs were assigned a high, medium, or low rating for each factor. The overall need rating for the PWA was based on the total number of ratings for high, medium, and low. The PWA was rated high overall if the area received three or more high ratings in the individual factors. The PWA was rated medium overall if the area received two high ratings in the individual factors. The PWA was rated low overall if the area received only one high rating in the individual factors. Table 12 below shows a breakdown of the individual scores for each PWA. These ratings translate into the following qualitative values:

- *High*: The area contributes considerably to recreational and ecological needs.
- *Medium*: The area contributes moderately to a recreational or an ecological need.
- *Low*: The area would not add desirable visitor opportunities or contribute to ecological diversity.

**Table 12: Summary of Need Ratings for Each Potential Wilderness Area**

Potential Wilderness Area (PWA)	Factor						Overall Rating
	1	2	3	4	5	6	
PW-05-03-D1-001 Dragoon	Med	High	Low	Low	Low	Med	<b>Low</b>
PW-05-03-D1-002 Chiricahua Addition South	Med	High	Low	High	Low	Med	<b>Med</b>
PW-05-03-D1-003 Ku Chish	Low	High	Low	High	Low	Med	<b>Med</b>
PW-05-03-D1-004 Bunk Robinson WSA	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D1-005 Whitmire Canyon WSA	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D1-006 Devil's Kitchen	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D1-007 Skeleton Canyon	Low	High	Low	Med	Low	Low	<b>Low</b>
PW-05-03-D1-008 Deer Creek	Low	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D1-009 Chiricahua Addition West	Low	High	Low	High	Low	High	<b>High</b>
PW-05-03-D1-010 Chiricahua Addition North	Low	High	Low	High	Low	High	<b>High</b>
PW-05-03-D1-011 Jhus Canyon	Low	High	Low	High	Low	High	<b>High</b>
PW-05-03-D2-001 Tumacacori	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D2-002 Mt. Wrightson Addition	High	High	Low	High	Low	High	<b>High</b>
PW-05-03-D2-003 Pajarita Addition West	Med	High	Low	Med	Low	Low	<b>Low</b>
PW-05-03-D2-004 Pajarita Addition East	Med	High	Low	Med	Low	Low	<b>Low</b>
PW-05-03-D2-005 Cobre	Med	High	Low	Med	Low	Low	<b>Low</b>

Potential Wilderness Area (PWA)	Factor						Overall Rating
	1	2	3	4	5	6	
PW-05-03-D2-006 Pajarito	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D2-007 Mount Fagan	High	High	Low	High	Low	Low	<b>High</b>
PW-05-03-D2-008 Happy Jack	Med	High	Low	High	Low	Med	<b>Med</b>
PW-05-03-D3-001 Whetstone	High	High	Low	Low	Low	Low	<b>Med</b>
PW-05-03-D3-002 Mt Washington	Med	High	Low	High	Low	Med	<b>Med</b>
PW-05-03-D3-003 Canelo	Med	High	Low	High	Low	Med	<b>Med</b>
PW-05-03-D4-001 Winchester	Low	High	Low	Low	Low	Med	<b>Low</b>
PW-05-03-D4-002 Galiuro Addition	Low	High	Low	Med	Low	High	<b>Med</b>
PW-05-03-D4-003 Mount Graham WSA	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D4-004 Santa Teresa Addition North	Low	High	Low	Low	Low	Med	<b>Low</b>
PW-05-03-D4-005 Santa Teresa Addition South	Med	High	Low	Low	Low	Med	<b>Low</b>
PW-05-03-D4-008 Mount Graham Addition	Med	High	Low	Med	Low	Med	<b>Low</b>
PW-05-03-D5-001 Samaniego Ridge	High	High	Low	Med	Low	Med	<b>Med</b>
PW-05-03-D5-002 East Catalina	High	High	Low	Med	Low	Med	<b>Med</b>
PW-03-05-D5-003 Little Rincon	High	High	Low	Med	Low	Low	<b>Med</b>

## References:

- Arizona State Parks. 2007. Arizona Statewide Comprehensive Outdoor Recreation Plan (SCORP).
- Bowker J. Michael; Murphy, D.; Cordell, H. Ken; English, Donald B.K.; Bergstrom, J.C.; Starbuck, C.M.; Betz, C.J.; Green, G.T. 2006. Wilderness and Primitive Area Recreation Participation and Consumption: An Examination of Demographic and Spatial Factors. *Journal of Agricultural and Applied Economics*, 38(2):317-326.
- Cole, David N. 1995. Trends in Wilderness Visitors and Visits. Research Paper INT-RP-483. Ogden, UT: USDA, Forest Service, Intermountain Research Station.
- U.S. Census Bureau. 1996. "Population Projections for States by Age, Sex, Race, and Hispanic Origin: 1995 to 2025", US Census Bureau Population Division.
- U.S. Census Bureau. 2000. Census 2000 Demographic Profile Highlights. American FactFinder.
- U.S. Census Bureau. 2005. Interim State Population Projections, 2005. US Census Bureau, Population Division.
- U.S. Census Bureau. 2008. 2006-2008 American Community Survey 3-Year Estimates: Phoenix-Mesa-Scottsdale, AZ Metropolitan Statistical Area. US Census Bureau, Population Division.
- USDA Forest Service. 2007a. "R3 Wilderness Needs Evaluation." Southwestern Region Wilderness Evaluation Working Group.
- USDA, Forest Service. 2007b. National Visitor Use Monitoring Program – National Project Results – 2001 through 2006.
- USDA Forest Service. (Coronado NF) "Coronado National Forest Comprehensive Evaluation Report (CER) Supplementary Document to meet Analysis of the Management Situation (AMS)."